



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,832	01/29/2004	Scott Woodward Bennett	1-25009	6601
46582	7590	05/20/2005	EXAMINER	
MACMILLAN, SOBANSKI & TODD, LLC ONE MARITIME PLAZA - FOURTH FLOOR 720 WATER STREET TOLEDO, OH 43604			LOPEZ, FRANK D	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,832

Applicant(s)

BENNETT ET AL.

Examiner

F. Daniel Lopez

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☒ Claim(s) 6-8 and 11-15 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/29/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Priority

Applicant claims the instant application is a continuation of PCT/EP02/08887, which claims foreign priority based on a Russian application number 2001-122,026. It is noted, however, that applicant has not filed a certified copy of the Russian application, or shown that the PCT application designated the United States (by filing the front page from the published PCT application).

Claim Rejections - 35 USC § 112

Claims 11-14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11 line 3 "a step-shaped punch" is confusing, since it appears to be the same as that of claim 10 line 3-4.

In claim 12 line 3-4 and claim 14 line 4 "a bottom forming die and a stepped-shaped punch" is confusing, since it appears to be the same as that of claim 10 line 3-5.

Claims not specifically mentioned are indefinite, since they depend from one of the above claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Art Unit: 3745

Claims 6-8 are rejected under 35 U.S.C. § 103 as being unpatentable over Japan 1-91930. Japan 1-91930 discloses a method of making a piston comprising punching (blanking) a disc shaped blank (22) from a piece of sheet metal; deep drawing the disc shaped blank into a cup shape by use of a first cylindrical punch (with a spherical head) through a first circular die (forming 23A) and then a second cylindrical punch (with a spherical head) through a second circular die opening (forming 23), wherein the diameter of the second die opening is smaller than the diameter of the first die opening; stamping the blank to form a piston head and cylindrical outer surface (forming 24); and forming an annular groove (27) in an outer surface; but does not disclose that the sheet metal is a rolled sheet metal.

Official notice is taken that it is well known that rolled sheet metal is a type of sheet metal usable for manufacturing. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use rolled sheet metal for the sheet metal of Japan 1-91930, as a matter of engineering expediency.

Claims 6-8 are rejected under 35 U.S.C. § 103 as being unpatentable over Japan 3-151,123 in view of Margetts. Japan 3-151,123 discloses a method of making a piston comprising deep drawing a disc shaped blank (1, fig 1A) into a cup shape by use of a first cylindrical punch through a first circular die (forming shape in fig 1B) and then a second cylindrical punch through a second circular die opening (forming shape in fig 1C or 1D), wherein the diameter of the second die opening is smaller than the diameter of the first die opening; stamping the blank to form a piston head and cylindrical outer surface (fig 2 and 3); but does not disclose that the disc shaped blank is punched from a piece of rolled sheet metal; or that an annular groove is formed in an outer surface.

Official notice is taken that it is well known that rolled sheet metal is a type of sheet metal usable for manufacturing and that disc can be punched from the rolled sheet metal. It would have been obvious at the time the invention was made to one having ordinary skill in the art to punch the blank of Japan 3-151,123 from a rolled sheet metal, as a matter of engineering expediency.

Art Unit: 3745

Margetts teaches, for a method of making a piston comprising deep drawing a cup shaped piston; that an annular groove is formed in an outer surface, for the purpose of providing a groove for a seal (8).

Since Margetts and Schanz are both from the same field of endeavor, the purpose disclosed by Schanz would have been recognized in the pertinent art of Margetts. It would have been obvious at the time the invention was made to one having ordinary skill in the art to form an annular groove in an outer surface of Japan 3-151,123, as taught by Margetts, for the purpose of providing a groove for a seal..

Claims 6 are rejected under 35 U.S.C. § 103 as being unpatentable over Margetts in view of. Margetts discloses a method of making a piston comprising punching (blanking) a disc shaped blank (22) from a piece of sheet metal; deep drawing the disc shaped sheet metal blank (column 2 line 9-10) into a cup shape by use of a cylindrical punch through a circular die (forming 14, fig 3, column 2 line 12-13); stamping the blank to form a piston head (11, column 2 line 18-19) and cylindrical outer surface (13, column 2 line 20-22); and forming an annular groove (16) in an outer surface; but does not disclose that the sheet metal is punched from a piece of rolled sheet metal.

Official notice is taken that it is well known that rolled sheet metal is a type of sheet metal usable for manufacturing and that disc can be punched from the rolled sheet metal. It would have been obvious at the time the invention was made to one having ordinary skill in the art to punch the blank of Margetts from a rolled sheet metal, as a matter of engineering expediency.

Claim 15 is rejected under 35 U.S.C. § 103 as being unpatentable over Margetts as applied to claim 6 above, and further in view of Schanz. The modified Margetts discloses all of the steps of claim 15; but does not disclose that subsequent to forming the annular groove, the outer surface is subsequently machined with at least one of grinding, coating and polishing.

Art Unit: 3745

Schanz teaches, for a method of making a piston comprising forming an annular groove (26) in an outer surface; that subsequent to forming the annular groove, the outer surface is coated with a coating (25), for the purpose of decreasing wear (e.g. column 1 line 69-70).

Since Margetts and Schanz are both from the same field of endeavor, the purpose disclosed by Schanz would have been recognized in the pertinent art of Margetts. It would have been obvious at the time the invention was made to one having ordinary skill in the art to coat the outer surface of the modified Margetts with a coating, subsequent to forming the annular groove, as taught by Schanz, for the purpose of decreasing wear.

Conclusion

Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

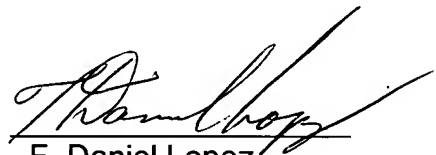
Claims 1-5 are allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson et al refers to a piston (fig 5) with a cylindrical portion having an annular groove (for 55) near an open end, and a side wall between the cylindrical portion and a head (53), wherein the side wall has a first portion that decreases in thickness monotonically, a second portion that is constant thickness and a third portion that increases monotonically. Townsend et al refers to a method of making a cup shaped article with multiple dies and punches.

Art Unit: 3745

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:15 AM -3:45 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is (703) 872-9306. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

A handwritten signature in black ink, appearing to read 'F. Daniel Lopez', is written over a horizontal line.

F. Daniel Lopez
Primary Examiner
Art Unit 3745
May 13, 2005